Washington State Institute for Public Policy

Benefit-Cost Results

Good Behavior Game

Benefit-cost estimates updated August 2014. Literature review updated April 2012.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our technical documentation.

Program Description: The Good Behavior Game is a 2-year classroom management strategy designed to improve aggressive/disruptive classroom behavior and prevent later criminality. The program is universal and can be applied to general populations of early elementary school children (grades 1 and 2).

Benefit-Cost Summary

Program benefits	
Participants	$5,343
Taxpayers	$2,655
Other (1)	$757
Other (2)	$134
Total	$8,890
Costs	($158)
Benefits minus cost	$8,732

Summary statistics	
Benefit to cost ratio	$56.34
Benefits minus costs	$8,732
Probability of a positive net present value	92 %

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2013). The economic discount rates and other relevant parameters are described in our technical documentation.

Detailed Monetary Benefit Estimates

Source of benefits	Benefits to: Participants	Taxpayers	Other (1)	Other (2)	Total benefits
From primary participant					
Crime	$0	$145	$405	$71	$621
Labor market earnings (alcohol abuse/dependence)	$5,247	$2,238	$0	$4	$7,488
Property loss (alcohol abuse/dependence)	$8	$0	$14	$0	$22
Health care (anxiety disorder)	$89	$273	$338	$138	$838
Adjustment for deadweight cost of program	$0	$0	$0	($79)	($79)
Totals	$5,343	$2,655	$757	$134	$8,890

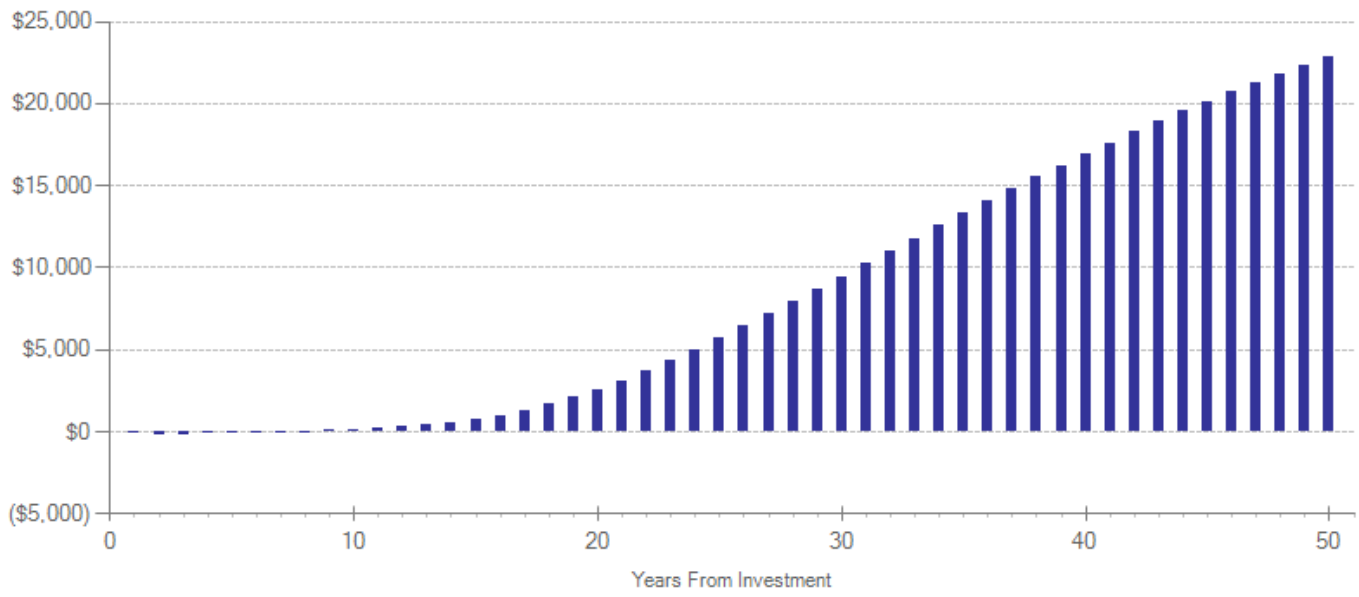
We created the two "other" categories to report results that do not fit neatly in the "participant" or "taxpayer" perspectives. In the "Other (1)" category we include the benefits of reductions in crime victimization and the economic spillover benefits of improvement in human capital outcomes. In the "Other (2)" category we include estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

Detailed Cost Estimates

	Annual cost	Program duration	Year dollars	Summary statistics	
Program costs	$78	2	2011	Present value of net program costs (in 2013 dollars)	($158)
Comparison costs	$0	1	2011	Uncertainty (+ or - %)	10 %

Costs include teacher training, classroom supplies, district GBG coach training, subcontractor support, and travel costs. The estimate is based on training for 30 teachers and one coach over two years and a cumulative 3,375 students served in GBG classrooms over five years. Information for this costs estimate was provided by Jeanne Poduska, Sc D, American Institutes for Research.

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta analysis. The uncertainty range is used in Monte Carlo risk analysis, described in our technical documentation.



Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Unadjusted effect size (random effects model)		Adjusted effect sizes and standard errors used in the benefit-cost analysis					
					First time ES is estimated			Second time ES is estimated		
			ES	p-value	ES	SE	Age	ES	SE	Age
Illicit drug abuse or dependence	Primary	1	-0.304	0.001	-0.115	0.090	20	-0.115	0.090	30
Alcohol abuse or dependence	Primary	1	-0.609	0.001	-0.231	0.150	20	-0.231	0.150	30
Externalizing behavior symptoms	Primary	1	-0.437	0.006	-0.437	0.158	12	-0.208	0.120	15
Major depressive disorder	Primary	2	-0.178	0.160	-0.138	0.127	20	-0.072	0.156	22
Anxiety disorder	Primary	2	-0.192	0.242	-0.192	0.165	20	-0.100	0.202	22
Suicide attempts	Primary	1	-0.195	0.279	-0.074	0.180	20	-0.074	0.180	25
Antisocial personality disorder	Primary	1	-0.295	0.032	-0.112	0.137	20	-0.112	0.137	25
Smoking before end of middle school	Primary	2	-0.248	0.215	-0.094	0.200	12	-0.094	0.200	22
Regular smoking	Primary	1	-0.593	0.001	-0.225	0.091	20	-0.225	0.091	30
High school graduation	Primary	1	0.162	0.174	0.062	0.119	20	0.062	0.119	20
Crime	Primary	1	-0.108	0.582	-0.041	0.197	20	-0.041	0.197	30

Citations Used in the Meta-Analysis

Kellam, S.G., & Anthony, J.C. (1998). Targeting early antecedents to prevent tobacco smoking: Findings from an epidemiologically based randomized field trial. *American Journal of Public Health, 88*(10), 1490-1495.

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Vuijk, P., van Lier, P.A.C., Crijnen, A.A.M., & Huizink, A.C. (2007). Testing sex-specific pathways from peer victimization to anxiety and depression in early adolescents through a randomized intervention trial. *Journal of Affective Disorders, 100*(1-3), 221-226.

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